



Fostering stakeholder involvement across generations – participation after site selection

12th FSC National Workshop, Belgium, 5-7 October 2022

Introduction

Radioactive waste management is characterised by long timeframes, stretching over decades to develop a suitable disposal solution and up to a million years to contain and isolate long-lived radioactive waste and/or spent nuclear fuel. This requires continuous engagement with stakeholders across extensive periods of time. In October 2022, the NEA Forum on Stakeholder Confidence (FSC) organised, in collaboration with the Belgian Agency for Radioactive Waste and Enriched Fissile Materials (ONDRAF/NIRAS), a national workshop in Dessel, Belgium, to explore the topic of stakeholder involvement across generations. The general goal of the FSC since its creation in 2000 has been to identify and develop best practices for stakeholder engagement in radioactive waste management. In Dessel, participants gathered to discuss how to keep local communities involved in radioactive waste management after site selection, how to engage youth as key stakeholders and which approaches can be used to communicate with stakeholders now and in the future. This document summarises the key lessons learnt from this workshop as well as four key challenges that were identified regarding long-term stakeholder involvement.



Young visitor enjoying the Tabloo permanent exhibit on radioactivity and radioactive waste.

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Challenge 1: Raising and preserving awareness

The long timeframes of radioactive waste management highlight the need to consider present and future generations alike. Awareness of radioactive waste and its management must not only be cultivated among people today, but also in the future. Hence the need for creating and preserving awareness across generations.

This requires a dedicated and well-designed communication strategy to set out clear expectations for all types of stakeholders and to help create awareness among new stakeholders. Practices in Belgium, France and Japan, in particular, draw attention to the importance of understandable and accessible information when designing a communication strategy. The Japanese radioactive waste management organisation (RWMO) NUMO, for instance, makes information more accessible to young people by focusing its communication strategy on venues and channels used by



FSC bureau member Annabelle Quenet (France) presenting the use of social media by Andra.

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Vice-Chairman Willy Melis, STORA (left) and Chairman Jef Verrees, MONA (right) presenting the current status of “added value projects” in local Belgian communities.

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young people. These include educational activities such as geology labs and dedicated exhibitions. Within its social media strategy, the French RWMO, Andra, invests in collaborations with social media influencers (podcasters, vloggers, YouTubers), to target a broad and diverse audience. Belgium’s ONDRAF/NIRAS is collaborating with a visual artist and the Belgian National Orchestra to create a live show, “FIREBIRD”, that uses music and video to tell the story of radioactive waste. All these initiatives aim to familiarise a broad audience with the topic of radioactive waste management, ultimately allowing the integration of stakeholder views and needs and helping to foster harmonious relationships between radioactive waste management organisations and local communities.

This involves also the views and needs of various stakeholders, both in the present and in the future. Certain decisions regarding radioactive waste management, such as retrievability, entail both risks and opportunities for future generations. The workshop highlighted the good practices and potential approaches to preserve awareness developed by the French and Belgian RWMOs. In France, Andra created a playlist on its YouTube channel mainly dedicated to awareness preservation, and conducted projects around the theme of “art and memory” in 2015, 2016 and 2018. This initiative is another example of how art can make complex topics more accessible. Furthermore, Andra is taking steps to preserve awareness through international collaborations, dedicated research, and by maintaining archives. In Belgium, the Tabloo communication center built by ONDRAF/NIRAS provides a home to various projects and initiatives, often in collaboration with or proposed by local community partners. One example is the storytelling project “Reporters of tomorrow”, which engages schoolchildren to preserve stories from older generations, familiarising them with the processes and challenges of memory preservation. The Tabloo site itself is meant to act as a place of remembrance and a form of cultural heritage, communicating to future generations information on the surface disposal site located in its vicinity.

The workshop presentations and discussions also emphasised how misinformation has become a significant threat and should therefore be taken into account when communicating. Concerns about fake news and other forms of misinformation seem to be at an all-time high. One of the key challenges is

to ensure that stakeholders trust the information they receive. Information warfare, and the resulting scepticism that it can create, raises a significant challenge in this context. Improving information and media literacy, increasing awareness of potential misinformation, and debunking incorrect information are some of the ways to deal with misinformation. The challenge becomes all the more difficult if the people who crafted the information are no longer present to justify and explain their messages, as will be the case in long-term awareness preservation.

Challenge 2: Creating conditions for long-term involvement

The involvement of local stakeholders at any level, not just locally, is a dynamic process with various parameters that influence the intensity and degree of participation. As a result, it needs to evolve with time and changing societal contexts and integrate the needs of specific phases of the radioactive waste management process. For example, during siting, planning and initial construction numerous decisions must be taken, while in later phases, especially after construction, the number and pace of decisions decreases. One of the workshop presentations described this evolution as being one towards “the art of hosting”, namely the art of maintaining and preserving relationships and awareness within processes where the engagement of the local community can be more or less intensive. As such, the nature of the process should allow for amendments to the social contract over time. This also means that stakeholders might be perceived as less active, or that the input required from stakeholders could be less clearly defined at some point in the process. Against this background, time and timing become important conditions of stakeholder involvement. Since the pace of radioactive waste management projects can be slow, it is a challenge to maintain stakeholder interest and involvement over long periods of time, as well as to ensure adequate resources have been set aside to allow such engagement. Nevertheless, time can also be an asset, as it makes it possible to create meaningful, dynamic and harmonious relations among stakeholders, adapted to the specific phase of the project and to the requirements of the actors involved. Furthermore, time provides room for

Right: Young people engaging in a focus group discussion conducted by Robbe Geysmans (SCK•CEN, Belgium). Left: French students Allan Gellenoncourt and Jérémy Blad presenting feedback on the PEP serious game.

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stakeholders to deliberate and put together the required input for decisions. Given the nature of these issues, it is important to create the right conditions to enable such long-term involvement:

- Sufficient resources need to be provided to support long-term engagement, making it a rewarding experience for all actors involved. In the context of the implementation of a surface repository for short-lived waste in Belgium, local partnerships have access to dedicated funding, allowing them, for example, to hire independent experts when specific information or analysis is needed. This funding ensures that local partnerships can fulfil their role in the decision-making process.
- Long-term engagement requires a clear framework, with transparency on the expectations that different stakeholders have regarding the engagement process. All stakeholders should understand the degree, conditions, requirements and extent of their involvement. This issue is affected by the literal, physical availability of space: if a dedicated infrastructure or building is provided to local communities, it seems more likely that stakeholders will take up – and potentially retain – a form of involvement.
- Stakeholders should feel empowered to contribute. This means that what is done with the input they provide must be clear for them. They must be able to see the effects their participation will have in the short and long term. Discussions at the workshop highlighted the impression that when given responsibility, stakeholders are more willing to get involved in (long-term) radioactive waste management, hence emphasising the need for meaningful engagement.

Challenge 3: Engaging young stakeholders

The long-term nature of radioactive waste management makes it an intergenerational issue, placing youth at the forefront of radioactive waste projects. Notwithstanding this fact, many countries and projects struggle to build and maintain youth involvement in radioactive waste management projects. In order to learn directly from the source about the catalysts and barriers to youth participation in radioactive

waste management, a youth delegation was invited to take part in various aspects of the workshop, while also benefiting from a parallel programme (see section on “Youth programme” below).

Some key lessons can be drawn from the German Rat der jungen Generation (RdjG – Council of the young generation), an initiative which invites young people from various backgrounds but with a shared interest in these issues to get involved in Germany’s search for a nuclear waste repository site. Starting from the idea that youth engagement should be “from young people, for young people”, this youth council aims to integrate young stakeholders and their views in the process of radioactive waste management. It offers the opportunity for independent participation in this process, and argues that involvement should be organised according to the values and worldviews of these young people, e.g. focusing on togetherness and flat hierarchies. As a potential barrier to participation, experience has shown how a perceived need for strong expertise in radioactive waste can be a hindrance for some young people in the path to involvement. The potential absence of a clear scope and purpose of participation is also considered discouraging, as well as the perception that some actors do not consider the young to be key stakeholders.

Overall, youth involvement requires the development of a strong connection with the interests and experiences of young people. To engage with young people, it is important to be open towards and understand their opinions and worldviews. This also means that the topic of radioactive waste management should be approached in a more holistic manner in order to create a shared view and knowledge of the issue – one that young people can relate to more easily. Radioactive waste management can, for example, be linked to energy security, climate change and sustainability, as these might be perceived as more relevant for young people. As a way to connect, the potential of digital media, including social media and games, for younger generations to get acquainted with radioactive waste issues, should be further explored. Bringing radioactive waste closer to young people also entails a good understanding of young people’s needs. A “sense of belonging”, for example, arguably plays an important role for them in deciding whether to get involved, which also means that once young people are engaged, others are more likely will join the process as well.

Young people playing the PEP Serious Game.
ONDRAF/NIRAS



Frédéric Bernier
(AFCN-FANC, Belgium)
presenting the PEP
serious game on
geological disposal
developed by SITEX.
ONDRAF/NIRAS

Challenge 4: Creating incentives and paths to engagement

When engaging with stakeholders, a key question is what would raise their interest in getting involved, or what would offer an incentive or path for them to take up a role in the waste management process. In addition, these entryways should provide for meaningful participation and the integration of different narratives into a collective story and, ultimately, into knowledge preservation.

Overall, engagement processes should highlight the opportunities they can bring to potential participants, as well as recognise the competencies of these potential participants and the added value of their involvement. For young people, for example, it can be helpful to emphasise how engagement would create opportunities to make and share creative content, to travel, or for future job opportunities. Citizen science also offers a potential way for youth and other stakeholders to take up a role in the waste management process. By assuming the role of “citizen scientists” involved in problem definition, data gathering, and/or data analysis, the skills and interests of citizens are validated, fostering discussions on how their knowledge and experience can complement the knowledge acquired by professional scientists. The gamification of the radioactive waste topic can also serve as a path to engagement, initial or sustained, highlighting how a seemingly complex and challenging issue can also be fun. A serious game on the “Pathway Evaluation Process” (PEP), developed by the SITEX network, provides a valuable example. The game focuses on discussing and exploring strategies for long-term waste management, demonstrating the complexities of decision-making and stimulating debate on the topic. Young participants played the game during the workshop. They thought it was an interesting opportunity that provided a concrete way to discuss, get familiar with and reflect on a topic that might not otherwise be considered. Adding some extra game elements could contribute even more to these outcomes. It was, however, felt that sometimes the consequences of decisions made were not very clear to participants, making the scope of the decision-making process rather difficult to grasp.

Youth programme

A delegation of young representatives from Belgium, France, Germany and Switzerland was invited to participate in the FSC workshop. The delegation followed a dedicated programme, which allowed them to attend presentations and roundtable discussions and engage in other activities. They visited the Tabloo exhibition and took an underground guided tour of the HADES research lab, learning about the geological disposal of radioactive waste in clay. They also played the serious game “Pathway Evaluation Process” (see Challenge 4).

A team of researchers from the Belgian Nuclear Research Centre SCK•CEN and ONDRAF/NIRAS conducted focus groups to gather the views of young stakeholders on radioactive waste management and youth involvement. During the focus groups, participants were asked about their perceptions of nuclear waste. Considerable time was also devoted to considering ways to foster youth engagement in radioactive waste management. The focus groups revealed that the participants have great trust in science and the scientific process, but that they experience a lack of accessible and neutral information. It also resulted in a number of potential ways to bolster and facilitate youth involvement, including education, youth parliaments and gamification.

Conclusion

The national workshop organised by the FSC in October 2022 in Dessel, Belgium identified four main challenges to involving stakeholders in the long term: continuously raising and preserving awareness; creating conditions for long-term involvement; involving youth as key stakeholders; and creating incentives and paths for engagement. The practices and approaches presented during the workshop highlighted the different ways in which RWMOs and other actors are approaching such challenges and dealing with the complexity of engaging stakeholders in the long term. The workshop also shed light on the need to remain flexible and continuously adapt practices and approaches to engage a multitude of stakeholders in radioactive waste management in a variety of ways and over time.